

## Summary of LEED Credits Related to the Federal Mandates

LEED™-NC, v.2.2

### Water Efficiency

WE Credit 1.1: Water Efficient Landscaping: Reduce by 50%

WE Credit 3.1: Water Use Reduction: 20% Reduction

### Energy & Atmosphere

EA Prereq 1: Fundamental Commissioning of the Building Energy Systems

EA Prereq 2: Minimum Energy Performance

EA Prereq 3: Fundamental Refrigeration Management

*EA Credit 1: Optimize Energy Performance (7 pts)*

EA Credit 3: Enhanced Commissioning

EA Credit 4: Enhanced Refrigeration Management

EA Credit 5: Measurement & Verification

### Materials & Resources

MR Credit 2.1: Construction Waste Management: Divert 50% from Disposal

MR Credit 4.1: Recycle Content: 10%

MR Credit 6: Rapidly Renewable Materials

MR Credit 7: Certified Wood

### Indoor Environmental Quality

EQ Prereq 1: Minimum IAQ Performance

EQ Credit 3.1: Construction IAQ Management Plan: During Construction

EQ Credit 3.2: Construction IAQ Management Plan: Before Occupancy

EQ Credit 4.1: Low-Emitting Materials: Adhesives & Sealants

EQ Credit 4.2: Low Emitting Materials: Paints & Coatings

EQ Credit 4.3: Low-Emitting Materials: Carpet Systems

EQ Credit 4.4: Low-Emitting Materials: Composite Wood & Agrifiber Products

EQ Credit 7.1: Thermal Comfort: Design

EQ Credit 8.1: Daylighting & Views: Daylight for 75% of Spaces

## How to use this Quick Reference:

The intent of this Quick Reference is to provide a short synopsis of the Federal Mandates in a single source document. For the full version of the Federal Mandates please visit the Sustainability CoP at:

<https://www.dmy.af.mil/afknprod/ASPs/CoP/OpenCoP.asp?Filter=OO-EN-AF-34>

This Quick Reference is not to replace the Federal Mandates, but rather only assist AF Project Managers in ensuring that projects are in compliance with them.

The interior of this reference contains a synopsis of the Federal Mandates. Each item in the Quick Reference has a section number associated with it to allow project managers to easily and quickly refer to the original document.

The “**Summary of LEED Credits Related to the Federal Mandates**” is an excerpt from the AF Sustainable Design and Development Policy Memo signed by Maj. Gen. Eulberg. The full version can be found in Attachment 1 of the Policy Memo. Also, please note that this is not the full list of LEED™-NC credits under v.2.2, but rather only a list of those credits which speak to the Federal Mandates.

To understand the color coding:

- 1) **Green, underlined** items indicate credits addressed in the MOU.
- 2) **Red, *italicized*** items indicate credits are in compliance with EPA 2005 and addressed in the MOU.

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# Air Force Federal Mandates Quick Reference



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# Air Force Federal Mandates Quick Reference

## Energy Policy Act (EPA) 2005

### Facility:

- "...apply sustainable design principles to siting, design, and construction..." if life-cycle cost effective. (§109)
- If life-cycle cost effective – buildings shall be designed to achieve energy consumption levels 30% below ASHRAE 90.1; and if water conservation technologies are used to achieve energy efficiency, technologies shall be used only to the extent it is life-cycle cost effective. (§109)
- Use advance meters to provide data at least daily that measures at least hourly consumption – shall be incorporated into existing tracking system (EMCS) and made available to facility/energy manager. (§103)
- Use Energy Star Rated equipment. (§104)

### Agency:

- Reduce energy consumption/gsf by 2% annually through 2015; 20% total – baseline 2003 (§102)
- To the extent economically feasible and technically practical, the following percentages of the total electrical demand by the Agency shall be from renewable resources: (§203)
  - ≥ 3% for FY2007-2009
  - ≥ 5% for FY2010-2012
  - ≥ 7.5% for FY2013 and beyond

## Air Force SDD Policy Memorandum (July 07)

### Facility:

- All buildings shall be designed to be capable of achieving LEED Silver – FY09 5% by cost will be selected for Certification (prior to construction); FY10+ 10% will be selected
- Allows for 2% additional cost on 1391 for 'SDD and EPA05'
- Identifies benchmark levels for:
  - Vertical (33 pts), Industrial (28 pts)
  - Horizontal (11 pts), Utility (8pts)

## Executive Order 13423: Strengthening Federal Environmental, Energy and Transportation Management

### Facility:

- Federal buildings shall comply with the Guiding Principles for FLHPSB MOU for new construction and major renovation. (§2(f))
- 15% of existing building inventory shall incorporate the Guiding Principles for FLHPSB MOU by 2015. (§2(f))

### Agency:

- Reduce energy consumption by 3% annually, 30% by 2015. (§2(a))
- 50% of the statutory required renewable energy consumed in a fiscal year must come from new renewable sources; and to the extent feasible the agency implements renewable energy generation projects on agency property for agency use. Sources are considered 'new' if they are installed after January 1, 1999. (§2(b))
- Reduce water consumption by 2% annually through 2015; 2007 baseline – shall be documented. (§2(c))
- In acquisition of goods and services use sustainable environmental practices, including biobased, environmentally preferable, energy-efficient, water-efficient, and recycled-content products; and use of paper at least 30% post-consumer fiber content. (§2(d))
- Reduce the quantity of toxic and hazardous chemicals and materials acquired, used, or disposed of by the agency; increase diversion of solid waste; and maintain cost-effective waste prevention and recycling. (§2(e))
- Reduce petroleum consumption in fleet vehicles by 2% annually through 2015; increase the total non-petroleum-based fuel consumption 10% annually; and when commercially available and when feasible (compared to non-plug-in-hybrid) use plug-in hybrid vehicles. (§2(g))
- Unless not available, 95% electronic products Electronic Product Environmental Assessment Tool (EPEAT)-registered; enable the Energy Star feature on computers and monitors; establish and implement policies to extend the useful life of electronic equipment. (§2(h))

## Guiding Principles (GP) for Federal Leadership in High Performance and Sustainable Building Memorandum of Understanding (FLHPSB MOU)

### Facility:

- Employ Integrated Design Principles
  - Integrated Design
  - Commissioning
- Optimize Energy Performance
  - Energy Efficiency (30% below ASHRAE 90.1)
  - Measurement and Verification
- Protect and Conserve Water
  - Indoor Water (20% reduction)
  - Outdoor Water (50% reduction)
- Enhance Indoor Environmental Quality
  - Ventilation and Thermal Comfort
  - Moisture Control
  - Daylighting (2% df in 75% of spaces)
  - Low-Emitting Materials
  - Protect Indoor Air Quality During Construction (72hr flush out prior to BOD)
- Reduce Environmental Impact of Materials
  - Recycled Content (10% post + 1/2 pre)
  - Biobased Content (USDA designated)
  - Construction Waste (50% diversion)
  - Ozone Depleting Compounds

## Energy Independence and Security Act (EISA) 2007

### Facility:

- Buildings shall be designed to reduce fossil fuel-generated energy consumption; 55% by 2010, 100% by 2030 (§433)
- 30% of hot water demand shall be met by solar water heaters, if lifecycle cost effective. (§523)
- Projects >5000 sf restore predevelopment hydrology to the maximum extent possible. (§438)
- Facilities shall have meters installed for natural gas and steam supply. (§434b)
- Use green building rating system to achieve min. certification level; 5% of new buildings. (§433)